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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,643

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Hiroaki Yasuda

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03/16/2006

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EXAMINER

HANNAHER, CONSTANTINE

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/718,643

Applicant(s)

YASUDA, HIROAKI

Examiner

Constantine Hannaher

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Drawings

1. The drawings were received on February 21, 2006. These drawings are acceptable.

### Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell *et al.* (US20030042445A1).

With respect to independent claim 1, Mitchell *et al.* discloses a radiation image readout apparatus (Fig. 6A) which comprises an optical system 40 for receiving stimulated emission 45 emitted from a radiation image converter panel 47 upon exposure to stimulating light 42, a photodetector 38 which receives the stimulated emission received by the optical system 40 for photoelectric conversion and has a sensitivity as recited, and a stimulating light cut filter 44 which is disposed in the optical path as recited, wherein the stimulating light cut filter 44 also serves as a longer wavelength light cut filter of the recited type. See paragraph [0062]. The optics 40 in the apparatus of Mitchell *et al.* collects stimulated emission 45 from screen 47 and conveys the light to the detector 38 (paragraph [0083]). Accordingly, the optics 40 either are a condenser optical system which converges the stimulated emission 45 or it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mitchell *et al.* such that optics 40 converged light from the narrow strip of screen 47 subject to stimulation for better efficiency in collecting stimulated emission and delivering it to the line detector 38.

With respect to dependent claim 2, the longer wavelength light cut filter 44 in the apparatus of Mitchell *et al.* is disposed between the optical system 40 and the photodetector 38 (Fig. 6A).

With respect to dependent claim 3, the longer wavelength light cut filter 44 in the apparatus of Mitchell *et al.* attenuates the intensity of light components in the recited range to the recited degree (paragraphs [0062] and [0095]).

With respect to dependent claim 7, the filter 44 in the apparatus of Mitchell *et al.* embodies physically separately disposed filters in view of the disclosure of coated colored glass (paragraph [0062]) wherein the effects of the coating and of the coloring are separate physical filters.

4. Claims 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arakawa *et al.* (US004896043A) in view of Arakawa (US005596202A).

With respect to independent claim 5, Arakawa *et al.* discloses a radiation image converter panel (Fig. 1) which emits stimulated emission upon exposure to stimulating light (column 4, lines 19-31) which comprises a filter 1 which transmits the stimulated emission and attenuates the intensity of the light components longer in wavelength than the stimulating light (see Fig. 2 compared with the wavelength of the stimulating light, column 4, line 65) and which is provided on the side of the radiation image converter panel from which the stimulated emission emitted from the radiation image converter panel is detected. Because the stimulating light arrives through protective film 1, there is no requirement in the panel of Arakawa *et al.* that the filter 1 transmit the stimulating light (instead, it is reflective, column 5, lines 1-2) but Arakawa shows that stimulation and emission occurs at the same side of a radiation image converter panel 4 (Fig. 2) and further that attenuating the intensity of the light components longer in wavelength than the stimulating light remains a requirement in such an arrangement (column 9, lines 17-24). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the panel of

Arakawa *et al.* such that filter 1 transmits stimulating light as well as the stimulated emission (*i.e.*, the panel of Arakawa *et al.* is inverted such that stimulating light and stimulated emission transmit through filter 1) such that the panel comprising the filter may be employed in a readout apparatus as described by Arakawa while still protecting any unfiltered photodetector from receiving longer wavelengths.

With respect to dependent claim 6, the graph in Fig. 2 of Arakawa *et al.* is suggestive that the transmission of the filter 1 in the disclosed panel results in an attenuation of the intensity of the light components in the recited range is to the recited degree, and Arakawa shows that filters with the recited performance are known (Figs. 10 and 11, column 9, lines 19-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify that the performance of filter 1 was as recited in view of the effective performance in protecting the photodetector described by Arakawa.

With respect to dependent claim 8, the panel suggested by Arakawa *et al.* and Arakawa further comprises a filter of the recited type, location, and separate physical disposition (column 7, lines 13-25 of Arakawa). It is not a requirement of this claim that the stimulating light cut filter have any necessary physical connection to the “panel” and the sole illustrated embodiment of Fig. 6 shows that the “panel” does not include such a filter.

#### **Double Patenting**

5. Claims 1 and 4 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 10/391,272 in view of Mitchell *et al.* (US20030042445A1). Claim 2 of the copending application (as found in US2003/0179415A1) anticipates the elements of the claimed radiation image read-out apparatus of independent claim 1 but for the inclusion of a longer wavelength light cut filter. The stimulating

light cut filter 44 in the radiation image read-out apparatus of Mitchell *et al.* serves as a longer wavelength light cut filter of the recited type (paragraph [0062]). In view of the improved rejection of light to which the photodetector in the apparatus claimed by the copending application (clause iii of claim 2) is sensitive as suggested by Mitchell *et al.* (paragraph [0062]), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the claimed apparatus to comprise a longer wavelength light cut filter. Claim 2 of the copending application further anticipates the element of the correction means of dependent claim 4 (paragraph between clause iii and clause a).

This is a provisional obviousness-type double patenting rejection.

#### **Response to Submission(s)**

6. Applicant's representative may point to the declaration as often as desired, the Office *has not been able to discern the city and state or foreign country of residence* exactly as stated by the Examiner as manifest at least in the paper BIB. Kanagawa is not a city in Japan.

7. Applicant's arguments filed February 21, 2006 have been fully considered but they are not persuasive.

The attempt to simply deny the plain teachings of Mitchell *et al.* is audacious but unpersuasive. Applicant's representative states that longer wavelength components may be passed to the detector according to Mitchell *et al.* (page 7). Actually, Mitchell *et al.* states that the attenuation of a light filter 44 as used in Fig. 6A ("positioned between the array of lenses and the line detector") "of the excitation wavelength and infrared should be better than 10<sup>8</sup>" (paragraph [0095]). That is, longer wavelengths (and infrared is "longer" than the excitation "wavelengths in the range of 630 to 700 nm," paragraph [0059]) are attenuated to at least the same degree as the excitation wavelength is attenuated. Applicant's representative states that the filters of Mitchell *et al.* are in the path from the

light source and relies on Fig. 4. Actually, element 44 in Fig. 4 is a fiber optic bundle and band pass optical filter has the reference symbol 46. Does it really make sense to applicant that Mitchell *et al.* would teach a filter which *transmits but one part in  $10^8$  at the excitation wavelength* (paragraph [0062]) as a filter *in the optical path of the excitation radiation* (paragraph [0061])? As made plain in Fig. 6A, a filter 44 of the type described in paragraphs [0062] and [0095] is found exactly as recited, in the optical path between the photodetectors 38 and the panel 47.

There is no error in applying “a” filter 44 as found in Mitchell *et al.* in a double patenting rejection. The addition of claim 7, and the disclosure of Fig. 4D and common element 33A, shows that the inclusion of a separate filter for the recited two purposes is not a requirement of claim 1.

The purpose of the reflectivity of the filter 1 in the panel of Arakawa *et al.* is for an increased chance of stimulating rays stimulating an emission. It does not render Arakawa *et al.* unsatisfactory for the additional purpose of preventing the stimulating light and longer wavelengths from reaching any photodetector to modify the reference as proposed by Examiner in view of the teachings of Arakawa.

For at least the reasons explained above, Applicant is not entitled to a favorable determination of patentability in view of the arguments submitted February 21, 2006.

## Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (571) 272-2437. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Constantine Hannaher  
Primary Examiner